

NWAA Labs

25132 Rye Canyon Loop, Santa Clarita, CA 91355, Phone:(253) 973-1018

Email address...Audio_Ron@msn.com

SOUND ABSORPTION

TEST REPORT No. NW052507-1

Client: Metal Deck Group, a unit of CSI
650 Rosewood Drive
Columbia, SC 29202

Test Date: 25 May 2007

Test Specimen: Perforated Metal Decking

INTRODUCTION

The methods and procedures used in this test conform to the provisions and requirements of ASTM Procedure C 423-02a, *Standard Test Method for Sound Absorption Coefficients by the Reverberation Room Method*. Copies of the test standard are available at www.astm.org. The test chamber is a cuboid, 871.7cm long by 541cm wide by 609.6 cm high, and volume is 275 cubic meters. There are six fixed surfaces and two movable/fixed surfaces oriented as diffusors in the reverberation room. There are two sources one in each corner consisting of two Dodecahedron speakers and two sub-bass cabinets for extended low frequency capabilities. This test report relates only to the item(s) tested. Any advertisement that utilizes this test report or test data must not imply product certification or endorsement by NWAA Labs.

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of Metal Dek Group Versa-Dek 3.5 LSAC perforated metal decking, roof application. The test specimen consisted of four panels, each of which was nominally 9 feet (2.74 m) by 2 feet (610 mm) by 3-1/2 inches (88.9 mm) thick. The panels had a dove tail shape profile with an 8 inch (203 mm) pitch. The perforated portion of each pitch was 7-1/4 inches (184 mm). The perforations were 0.156 inch (3.96 mm) diameter holes on 0.324 inch (8.23 mm) staggered centers. Behind the perforated sections were rectangular pieces of 4 inch (102 mm) by 2 inch (50.8 mm) thick, 3 lb./ft³ (48 kg/m³) density fiberglass. The fiberglass was placed in metal caps which were located directly behind the perforated surface. During the test, the metal caps and fiberglass were held up against the perforated metal by screwing through the perforations into the flanges on the metal caps. Foam closures were used to seal both ends of each metal cap. The four panels were placed side by side on the test chamber floor to form a nominal 9 foot (2.74 m) by 8 foot (2.44 m) sample. The ends were covered with angle aluminum. The overall dimensions of the specimen were 108 inches (2.74 m) by 95-1/4 inches (2.42 m) by 3-1/2 inches (89 mm) thick. The overall weight of the specimen was 368.5 lbs. (167 kg).

Test results are on the following pages.

Submitted by,
NWAA Labs Inc



Ron Sauro
NWAA Labs Inc

NWAA Labs

25132 Rye Canyon Loop
 Santa Clarita, CA 91355
 (253)-973-1018

Test Date:	25-May-2007
Mounting per ASTM E795-00:	Type A
Area Tested:	71.44 Ft ² (6.64m ²)
Temperature:	72.4°F
Humidity:	48%

Test Results

Metal Deck Versa-Dek 3.5 LSAC 2 inch glass				
	Frequency	Absorption Coefficient	Absorption in Sabines	
	100Hz	0.13	9.40	
	125Hz	0.05	3.70	
	160Hz	0.22	15.50	
	200Hz	0.30	21.60	
	250Hz	0.51	36.60	
	315Hz	0.84	60.20	
	400Hz	1.02	72.60	
	500Hz	1.06	76.00	
	630Hz	1.03	73.80	
	800Hz	1.01	71.80	
	1000Hz	0.95	68.00	
	1250Hz	0.93	66.70	
	1600Hz	0.92	65.70	
	2000Hz	0.85	61.10	
	2500Hz	0.83	59.60	
	3150Hz	0.81	58.20	
	4000Hz	0.78	55.40	
	5000Hz	0.76	54.60	
	6300Hz	0.71	50.40	
	8000Hz	0.67	47.90	
	10000Hz	0.56	40.10	

NRC	0.85
SAA	0.86

Metal Deck Versa-Dek 3.5 LSAC 2 inch Glass

